

ABSTRACT OF THE INVENTION

45 An improved pin housing sub-assembly configured for reliable assembly and stability as an intermediate sub-assembly. The length of the plunger return spring is greater than the diameter of the spring well in the pin housing, such that the spring cannot be accidentally installed sideways in the well. During assembly, the non-compressed longer spring places the pushrod seat flush with the end of the pin
50 housing. A shallow annular groove is provided in the inner wall of the pin housing near the outer end thereof, and an expansion ring may be installed therein when the plunger return spring is slightly compressed. The expansion ring holds the sub-assembly together as an intermediate but is displaced by the spring tower in a subsequent assembly step to become the locking ring between the pin housing and the spring
55 tower, as in the prior art.